Historical Papers
Communications historiques

Factors Affecting Prairie Settlement: A Case Study of Abernethy, Saskatchewan, in the 1880s

Lyle Dick

Volume 20, numéro 1, 1985

Montréal 1985

URI : https://id.erudit.org/iderudit/030930ar
DOI : https://doi.org/10.7202/030930ar

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Éditeur(s)

The Canadian Historical Association/La Société historique du Canada

ISSN

0068-8878 (imprimé)
1712-9109 (numérique)

Découvrir la revue

Citer cet article

Dick, L. (1985). Factors Affecting Prairie Settlement: A Case Study of Abernethy, Saskatchewan, in the 1880s. *Historical Papers / Communications historiques*, *20*(1), 11–28. https://doi.org/10.7202/030930ar

Résumé de l'article

La colonisation rurale des prairies à l'époque de la National Policy a souvent été perçue comme un processus fondamental pour récompenser les colons débrouillards et pour punir les incompétents. Pour vérifier cette hypothèse, le présent travail étudie

de façon détaillée la colonisation de deux districts de la Saskatchewan. Les trois points d'analyse sont la procedure d'acquisition des terres, la performance des colons durant la période d'essai de l'exploitation agricole, ainsi que le rendement économique à long terme après la réception du titre.

Pour ce qui est de Vacquisition des terres, les colons anglo-canadiens du district d'Abernethy et les colons germanophones de Neudorf choisirent les terres disponibles près de la voie ferrée. Ce choix indique une tendance initiale vers la production commerciale chez ces deux groupes. La différence était que les colons d'Abernethy, qui arrivèrent surtout dans les années 1880, obtinrent les meilleures terres dans la prairie. Alors qu'environ la moitié de ces colons ne remplirent jamais les conditions de cession de leurs terres, ceux qui reçurent leur titre se montrèrent très persistants en tant que fermiers. On a aussi pu constater l'existence d'un lien étroit entre la réception de terrains additionnels gratuits et la réussite économique à long terme.

Les colons allemands qui s'établirent dans les années 1890, près de là à Neudorf, sur des terres marécageuses et boisées, ont manifesté une tendance contraire. Ceux-ci avaient tendance à faire leurs preuves mais à laisser leurs fermes peu de temps après avoir reçu leur titre. Des études sur le rendement économique à long terme des colons dans les deux districts soutiennent i hypothèse selon laquelle l'arrivée précoce et l'acquisition de terres fertiles, peu coûteuses et accessibles étaient de puissants déter- minants de la réussite de ces colons.

Factors Affecting Prairie Settlement: A Case Study of Abernethy, Saskatchewan, in the 1880s*

LYLE DICK

Résumé

Prairie agricultural settlement in the era of the National Policy has often been viewed as an organic process which rewarded the resourceful settlers, while punishing the unsuitable ones. To test this assumption the paper offers a detailed investigation of settlement in two districts in Saskatchewan. The three areas of analysis were the process of land acquisition, the settlers' performance during the homestead "proving-up" period, and long-term economic performance after the receipt of patent.

In terms of land acquisition, both Anglo-Canadian settlers in the Abernethy district and German-speaking settlers at Neudorf chose the available lands nearest the railway. Their selection suggests an initial tendency toward commercial production among both groups. The difference was that Abernethy settlers, who generally arrived in the 1880s, claimed superior lands on the open prairie. While about half of these settlers never "proved-up" their homesteads, those who received their patents showed a fairly high degree of persistence as farmers. A close relationship between the receipt of additional quarter-sections of free grant land and long-term economic success was also observed.

The German settlers at nearby Neudorf, who settled in the 1890s on more marshy and wooded lands, showed a contrary tendency. These settlers were far less likely to cancel their homestead entries, but tended to leave their farms soon after receiving their patents. Studies of the long-term economic performance of settlers in both districts provide support for the proposition that early arrival, and the acquisition of good, cheap, accessible land were among the most powerful determinants of success in settlement.

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*The author would like to acknowledge the contribution of David Greenwood, who provided the research design for the statistical analysis of land acquisition, and of Sarah Carter, who coded the data on Fortran recording forms. The SAS computer package was used with the permission of Michael Camp of the SAS Institute at Raleigh, North Carolina.

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A deeply ingrained theme in the folklore of prairie settlement is the idea that hard work, determination and perseverance were the basis of the settler's success. Numerous local histories and pioneer reminiscences relate the many stories of the settlers' humble origins, their struggle against hardship and final triumph over adversity. More scholarly works including John Archer's recent history of Saskatchewan reiterate this interpretation. In describing the difference between success and failure Archer elevates the settlement process almost to a Darwinian survival of the fittest:

> Some were unable to cope with the hardships and isolation of frontier life, while others were speculators and were weeded out as they failed to complete homestead requirements, or sold their lands for a quick profit. The great majority stuck it out, adapting, overcoming, forging new communities — a process that was repeated as each new region was opened up to agricultural man.[1]

But if human attributes such as perseverance and adaptability were the determining factors, it might be expected that no group would have a monopoly on these attributes and that they would be more or less evenly distributed throughout the West. An examination of homestead failure rates in different districts shows that this was not the case; some districts had a much higher incidence of failure than others. Moreover, it is surely pertinent to ask whether remaining on one's homestead necessarily implied success. Were settlers persevering in prosperity or poverty? A more comprehensive

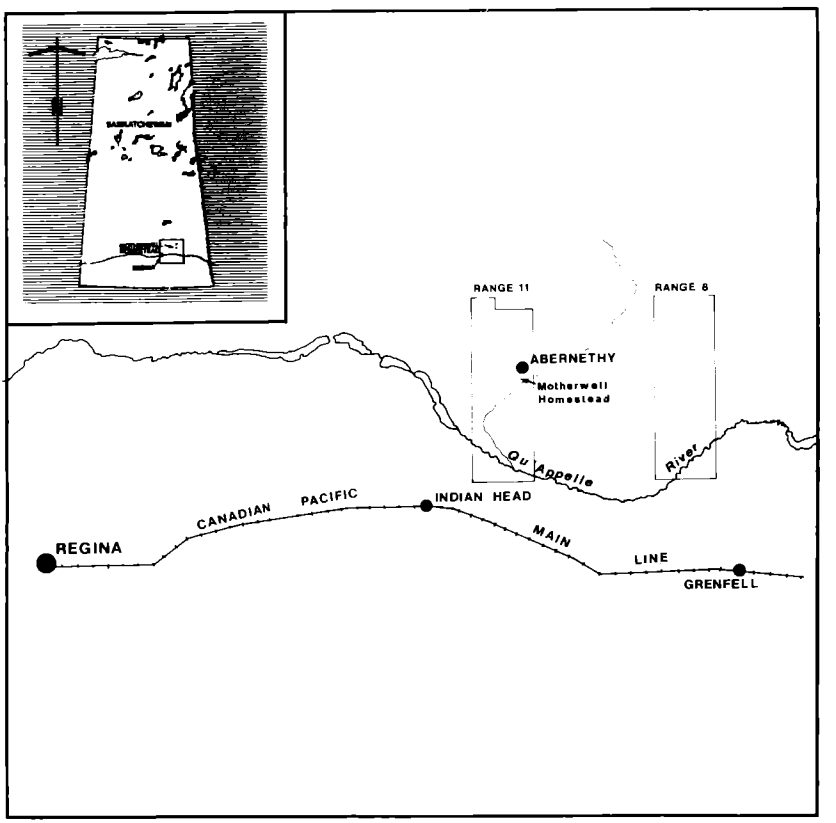
1. John Archer, *Saskatchewan: A History* (Saskatoon, 1980), p. 141.

investigation of why the settlement process rewarded some and not others appears to be warranted. This paper examines these issues through a detailed analysis of Anglo-Canadian settlement in the Abernethy district of Saskatchewan in the 1880s and succeeding decades. For comparative purposes, German settlement in the nearby community of Neudorf has also been investigated.

Abernethy was not selected randomly nor was it selected as a typical case. The choice of study area was determined by the location of the Motherwell Homestead National Historic Park, which happens to be in the middle of this municipality.

Figure 1
Location of Sample Townships in Southeastern Saskatchewan

The blocked-in area on the left enclosing the Village of Abernethy represents the three townships in Range 11 west of the 2nd Meridian selected for quantitative analysis of Anglo-Saxon Ontarian settlement. The blocked-in area on the right constitutes the three townships of predominantly eastern German settlement in Range 8 around the town of Neudorf.



However, in some important respects Abernethy was representative of settlement in the early years of the National Policy. It was in this period, the 1880s, that the character of Anglo-Canadian settlement crystallized in Manitoba and the eastern region of the District of Assiniboia. Abernethy's experience, particularly in the key area of land policy, was not in any sense unique but was shared by numerous other settlements of the same period.

It would be helpful to place Abernethy in its geographical context. The Abernethy district is an area of gently undulating prairie to the east of the Qu'Appelle Lakes in southeastern Saskatchewan. Its principal physical feature is the Qu'Appelle River valley, which carves a three hundred to four hundred foot deep channel to form the municipality's southern boundary. The only other major physical feature is Pheasant Creek and its Coulée, a major tributary of the Qu'Appelle that meanders through the district in a generally northeast to southwest direction before merging with the river. Apart from a few sloughs and bluffs of trees in the northern townships, most lands in the district were open prairie at the time of settlement. Its soils were described as "of the very best quality" by Dominion land surveyors in 1881 and 1882.[2] This assessment has received more recent corroboration by the ARDA Canada Land Inventory, which classified the majority of Abernethy-area lands as having Class 1 soil (Figure 2). It was therefore not surprising that when the District of Assiniboia was first settled systematically one hundred years ago, these lands were among the first to be taken.

Since Dominion lands were the dominant disposals in this early period of Abernethy's development, it is necessary to outline some features of the operative homestead policy. The basic 160 acre grant was established by order-in-council on 25 April 1871 and consolidated in the Dominion Lands Act of 1872.[3] This legislation provided for a sectional survey, dividing the Canadian prairie lands into a grid of townships six miles square. Both the survey system and land disposal provisions were patterned on the American model. This approach reflected the Canadian government's desire to keep pace with inducements offered by the United States, which was competing for many of the same settlers.

Under the initial provisions, any family head or male twenty-one years or older could be granted entry to a 160 acre homestead, subject to payment of a ten dollar entry fee and fulfillment of prescribed settlers' duties. At first these duties included proof of cultivation and residence on the homestead for three years between entry and patent. The 1871 order-in-council also provided for the sale of unappropriated public lands at the rate of one dollar an acre, with no purchaser eligible for more than a section of 640 acres.[4]

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2. Report of J. Bourgeois, Dominion Lands Surveyor in Canada, *Dominion Lands Surveyors' Reports* (Ottawa, 1886), p. 111.
3. Chester Martin, *"Dominion Lands" Policy*, Canadian Frontiers of Settlement Series, Vol. II (Toronto, 1938), pp. 395–6.
4. Canada. Public Archives (PAC), RG 15, Department of the Interior Records, Vol. 13, Saskatchewan Resources Commission 1934, General Information File, "Brief Outline of the Policy of the Dominion Government Since Confederation as to the Administration and Management of the Public Lands," p. 1.

Figure 2

Map adapted from the ARDA Canada Land Inventory Melville Map Sheet Area 62L (1967), reproduced with the permission of the Surveys and Mapping Branch, Department of Energy Mines and Resources.

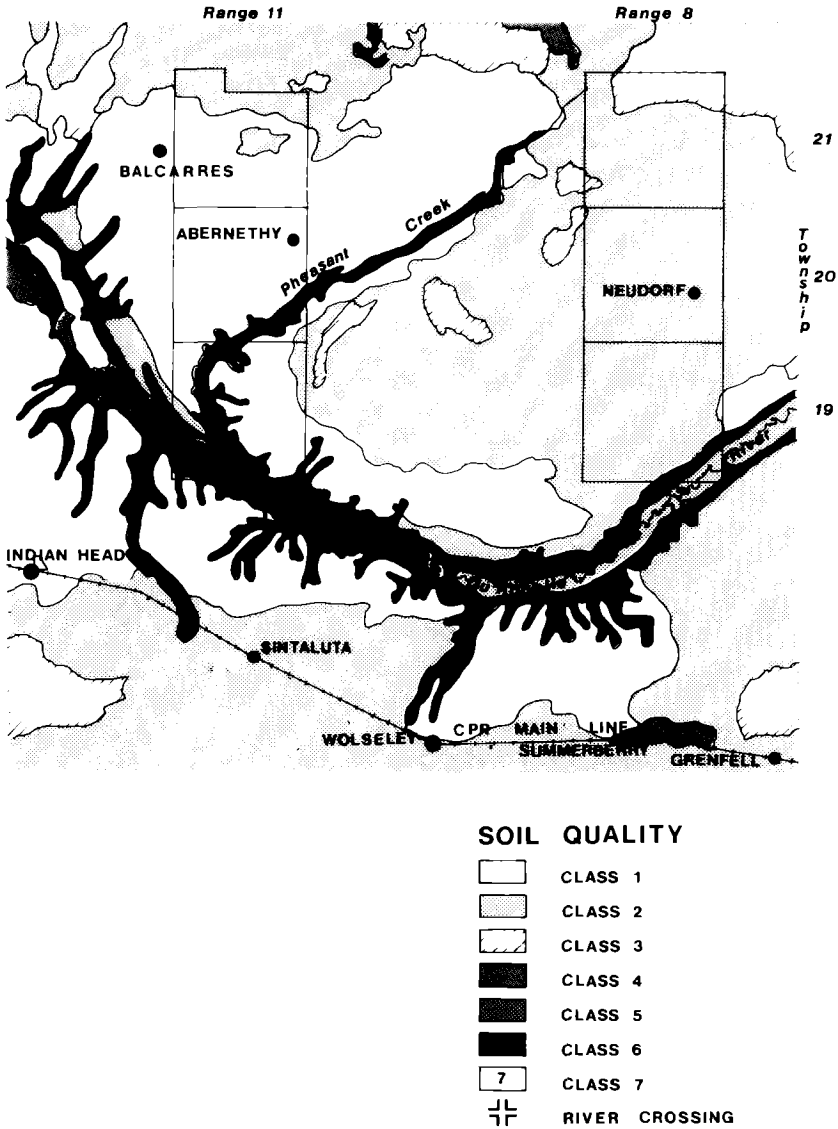
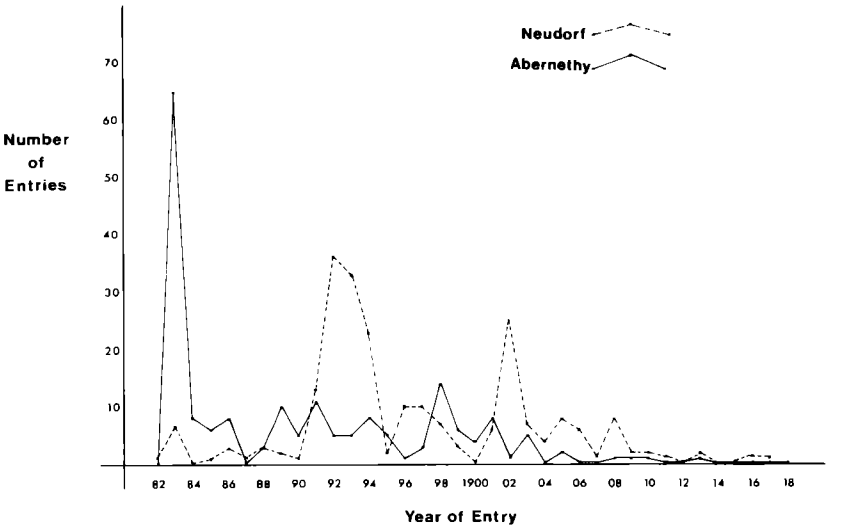


Figure 3
Distribution of Homestead Entries by Year of Entry



Two other early forms of Dominion Land disposals are pertinent to this discussion. The original order-in-council established the preemption privilege, which permitted the holder of a homestead to make entry for an adjacent quarter-section of Dominion land. In the early period preemption entries were easily obtained; Regina *Leader* editor N. F. Davin commented that if a settler walked the gumbo streets of Regina after a rainstorm he was liable to pick up a homestead on one foot and a preemption on the other. However, the settler was obliged first to obtain a patent for his homestead and pay a purchase price before he was granted patent to the preemption.[5] In the 1880s the usual price was $2.50 per acre. The preemption privilege was later discontinued, effective 1 January 1890 and was not to be revived until 1908.[6]

The other type of Dominion land grant available to Abernethy settlers during the 1880s was the second homestead, introduced in the Dominion Lands Act of 1883.[7] In introducing second homesteads, the government hoped to encourage experienced settlers to open up new lands on the leading frontier of settlement. The intent was that these settlers would sell their first homesteads after improving them, in order to take advantage of additional "free" lands farther west. However, since no geographical restriction was placed on second homestead entries, many early settlers simply exploited this provision by making a second entry in the immediate vicinity of their farms. Realizing that it was not fulfilling the intended purpose, the government repealed this provision in 1886, although subsequent amendments to the Dominion Lands Act

5. Ibid.
6. Ibid., p. 5.
7 Ibid., p. 3.

extended the deadline for completion of first homestead duties for the purpose of qualifying for a second entry to 2 June 1889.[8] Another important amendment to the 1892 act provided a holder of a homestead and preemption with the option of entering his preemption quarter as a second homestead, provided he had become entitled to his homestead patent before 2 June 1889.[9]

The major private agency of land disposal in the Abernethy area was the Canadian Pacific Railway Company. Under the terms of an 1879 order-in-council and subsequent regulations the CPR Company was awarded a huge grant of suitable agricultural land to build about two thousand miles of track, the land to be disposed in a solid block within five miles of the CPR main line, and in odd-numbered sections in four other belts on the periphery.[10] Since Abernethy fell within these peripheral belts most odd-numbered sections in the district were granted to the railway, although these lands were not opened for sale until the 1890s. Apart from CPR and free grant lands, two sections in each township were set aside for the support and maintenance of schools, and $1\frac{3}{4}$ sections were claimed by the Hudson's Bay Company as its entitlement under the transfer of 1870. In every fifth township, this grant was raised to two full sections. In the Abernethy area these lands were not put on the market until after 1900. The early structure of settlement was therefore determined by free grant disposals.

Before disposing of these lands the government first displaced the existing inhabitants. In this region, plains native cultures, principally the Cree, had pursued a semimigratory economy based on the buffalo. With the signing of Treaty Number 4, the Cree were placed on reserves to the north of Abernethy as a prelude to opening lands in the Qu'Appelle region to settlement.[11] From the 1860s a number of Red River Métis had settled along the banks of the Qu'Appelle River and the shores of the Fishing Lakes. Their dispossession by land speculators and eventual displacement by white settlers have been documented in other contexts.[12] It is simply noted here that partly in consequence of the arbitrary imposition of the grid survey on their existing patterns of cultivation and land tenure, and for a number of other reasons, the Métis soon were forced to abandon their farms. They were among the first casualties of the Euro-Canadian settlement process.

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8. Ibid.
9. Ibid., p. 4.
10. James B. Hedges, *Building the Canadian West: The Land and Colonization Policies of the Canadian Pacific Railway* (New York, 1939), pp. 21–2.
11. Alexander Morris, *The Treaties of Canada with the Indians* (Toronto, 1880), pp. 77–125.
12. For an elaboration of the land disposal difficulties encountered by the Qu'Appelle Métis see Lyle Dick "A Social and Economic History of the Abernethy District, Saskatchewan, 1880–1920," unpublished manuscript, Parks Canada, Winnipeg, 1984, pp. 13–20. Comprehensive treatments of the dispossession of Métis lands in other areas may be found in Diane Payment, "Batoche, Saskatchewan, 1870–1930 Histoire d'une Communauté Métisse," research manuscript, Parks Canada, 1983 (publication pending in Parks Canada's *Studies in Archaeology, Architecture and History* series) and D. N. Sprague "Government Lawlessness in the Administration of Manitoba Land Claims, 1870–1887," *Manitoba Law Journal* 10 (1980), pp. 415–41.

The Pheasant Plains, now called the Abernethy district, received its first permanent white settlers in 1882. In the spring of that year Anglo-Ontarian and British immigrants travelled by rail to the terminus of completed CPR track at Brandon, Manitoba.[13] Purchasing teams of oxen and carts they headed west to Fort Qu'Appelle, where they made entry for their homesteads at the Dominion lands office. Some settlers enlisted the assistance of a free-lance "land locator" in finding suitable grants.[14] Since all the land south of the Qu'Appelle Valley had already been claimed, these settlers selected homesteads on the plains surrounding Pheasant Creek.

In taking land north of the Qu'Appelle the settlers evidently expected the early arrival of rail service to their locality. In 1882 the Souris and Rocky Mountain Railway received a Dominion charter to build a line from Melbourne, Manitoba to the Rocky Mountains via Fort Ellice and Battleford.[15] The company made slight progress in building the railway and construction came to a standstill in 1884 during a series of disputes with the labourers, who claimed that they had never been paid for their work. Immediately settlers in districts along the proposed route of the railway petitioned the Dominion government for redress for the construction delays. The petitioners claimed that they had settled in these areas only on the assumption that rail service would soon be provided. Since their lands were a prohibitive distance from the CPR main line, they asserted that failure to build the railway would force most of them to abandon their farms.[16] In 1885 the government issued an order-in-council permitting another syndicate, the North West Central Railway Company, to assume the Souris and Rocky Mountain charter.[17] The line was not built until the CPR picked up the charter and constructed its Kirkella branch line in 1903–04.

While the proposed railway explained the general choice of land north of the Qu'Appelle Valley, it remained for each individual settler to select his own parcel. Since land selection could be crucial to a settler's subsequent economic performance, it is important to investigate this process in some detail. In an attempt to determine the principal factors bearing on land selection, a statistical approach was employed. Possible factors were identified in the historical literature and were coded as dependent variables in a multiple regression equation in which the settler's year of entry was the independent variable. The dependent variables included soil quality; accessibility to wood and water; proximity to grain handling facilities on the CPR main line; and proximity to supply centres. The regression analysis was conducted for three townships surrounding and to the north and south of Abernethy. For comparative purposes the analysis was also performed for an additional three townships around the village of Neudorf, fifteen miles to the east.

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13. Bert Garratt, ed. *Dance on the Bridge: A History of Abernethy and Area* (Abernethy, Saskatchewan, 1983), p. 7.
14. Ibid., p. 8.
15. PAC, RG 15, Department of the Interior Records, Vol. 247, File No. 25149–2.
16. Ibid., "To His Excellency The Governor-General of Canada in Council," Received, Department of the Interior, 10 July 1885.
17. Saskatchewan Archives Board, Saskatoon (SABS), Microfilm No. 6.1, Department of the Interior, Orders in Council, 1885, p. 307.

Table 1
Diminishing Percentage of Settlers Remaining on their Homesteads at Various Time Intervals After the Receipt of Patent

	Abernethy Homesteaders		Neudorf Homesteaders	
Time Interval	**Number persisting**	**Percentage persisting**	**Number persisting**	**Percentage persisting**
In year of patent	56	100	50	100
5 years after patent	49	88	35	70
10 years after patent	43	77	25	50
15 years after patent	31	55	19	38
20 years after patent	26	46	12	24
25 years after patent	21	38	—	—
30 years after patent	8	14	—	—
35 years after patent	6	11	—	—

Rates of persistence were calculated for 106 homesteaders in the Abernethy-area township of Tp. 20 R 11 and the Neudorf-area township of Tp. 19 R 8. Note: Due to its late settlement, no titles were searched for the Neudorf homesteaders beyond twenty years after patent.

The results of the regression analysis showed that for both Abernethy and Neudorf, approximately 60 per cent of the variability among years of entry was explained by variables based on distance from the railway. Each of the other variables appeared to explain only minor portions of the remainder of the variability. These results suggest that accessibility to rail service was the dominant factor in land selection for settlers in both areas. This suggests that the Anglo-Canadian and German-speaking settlers intended to engage in commercial agricultural production from the outset.

But while Abernethy and Neudorf settlers appear to have been motivated by similar considerations in land selection, there were significant differences in land quality between the two districts. While Abernethy's lands were largely on the open prairie and possessed high quality soils, the land around Neudorf possessed secondary soils and was much more broken up by sloughs and tree bluffs. Settling only a few years after their Abernethy neighbours, the German settlers arrived after the best lands in the central Qu'Appelle region had already been claimed. Moreover, in terms of land opportunities the first group of Abernethy settlers arrived at the optimum time in the National Policy era. Not only did they have their choice of high quality lands, they were eligible to obtain up to 480 acres of Dominion land for an outlay of $420. Those settlers who elected to convert their preemption entries to second homesteads could obtain 320 acres of prime agricultural land for only twenty dollars. On the other hand the German homesteaders arrived in the years after 1889, when the preemption privilege was abolished and the second homestead was no longer operative for new settlers. Not only

were they restricted to a single quarter of free grant land, they settled on land of secondary quality, only part of which was arable.[18]

At the same time land entries did not necessarily translate into patents. A settler needed to "prove-up" his homestead, that is fulfill his settler's duties, or he would forfeit both homestead and preemption entries. It is well known that a high proportion of Dominion land entries were cancelled; Chester Martin calculated that 57 per cent of all homestead entries in Saskatchewan between 1911 and 1931 were not "proved up."[19] Although settled earlier Abernethy was not exempt from this pattern. A compilation of patent statistics for settlers in the three study townships shows a cancellation rate of 59 per cent of all entries. At Neudorf the overall cancellation rate was 28 per cent.

Why did these cancellations occur? One obvious possibility, variations in vocational experience, can easily be ruled out. Of settlers reporting their prior vocation on their homestead application forms, 98 per cent of the British nationals and 96 per cent of the non-British nationals had been farmers.[20] The overwhelming majority of settlers in both areas had some experience in farming.

The settlers themselves believed the lack of accessible rail service to be a serious impediment to the economic viability of their farms. In 1902 Abernethy-area settlers petitioned Prime Minister Wilfrid Laurier to provide rail service that had been promised twenty years earlier. The petitioners claimed that it was impossible for farmers to haul wheat twenty to thirty-five miles across the Qu'Appelle Valley "whose banks are 300 to 400 feet high, and leave anything like a reasonable result of the tiller's toil at the end of the year."[21] A measure of the impact of rail accessibility on a settler's chances for success is to calculate homestead cancellation rates for individual townships of varying distance from the railway. Township 19, Range 11 West of the 2nd Meridian, which possessed lands ranging between six and fourteen straight line miles from grain-loading facilities on the CPR main line, recorded forty-one patents to forty-two cancellations, for a cancellation rate of 51 per cent. In Township 20, ranging between fourteen and twenty-two miles from the railway, 57 per cent of all entries were cancelled. In Township 21, with lands between twenty-two and thirty miles distant, fully 75 per cent of the entries were cancelled.[22] Thus, it is fairly clear that the risks of homestead failure increased with distance from the railway, particularly beyond

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18. See SABS, Department of the Interior, "Homestead Files," No. 455780, Karl Adolf, Pheasant Forks, Assiniboia to the Dominion Lands Commission, 8 January 1898. See also the Declarations of Abandonment of Ludwig Hollinger and Frank Wirth in SABS, "Homestead Files," Nos. 698266 and 795174.
19. Chester Martin, *"Dominion Lands" Policy*, p. 409.
20. SABS, Department of the Interior, "Homestead Files" for Townships 19A, 19–21 in Ranges 8–12, West of the Second Meridian.
21. PAC, MG 26 E, Sir Wilfrid Laurier Papers, Series A, Vol. 224, fols. 63029–32, Petition of Abernethy Settlers to Laurier, 20 February 1902.
22. Saskatchewan Archives Board, Regina (SABR), Department of Agriculture, Lands Branch, Township Registers for Townships 19A, 19–21 in Ranges 8 and 11, West of the Second Meridian.

twenty to twenty-two miles. This conclusion is supported by an article in the *Abernethan*, the local newspaper, which stated that early settlers in the Balcarres district northwest of Abernethy had dropped out in the 1890s due to the lack of rail service.[23] Balcarres is in Township 21, where the highest cancellation ratios were registered.

Among settlers who took land nearer the railway, the failure rate was still about 50 per cent. The reasons for cancellations in these areas are more difficult to establish, although it seems probable that a substantial number were attributable to speculative entries by nonbona fide settlers. Little direct evidence of land speculation in the Abernethy district could be found, but an 1884 report dealing with settlers on lands allotted to the Touchwood-Qu'Appelle Land and Colonization Company about thirty miles to the northwest is revealing.[24] Homestead Inspector Rufus Stevenson reported a high rate of absenteeism, and a followup report a year later showed that thirty of ninety-nine settlers were still absent from their homesteads.[25] Skeptical that these entrants would ever become bona fide settlers, Stevenson recommended cancellation of their entries. Closer to Abernethy the Qu'Appelle *Progress* in 1885 reported that ten of thirty-five homestead entrants in a township just north of Balcarres had not visited their lands in the two years since the entry, and that their lands were also subject to cancellation.[26]

Homestead cancellations no doubt also resulted from generally adverse economic conditions in the North West Territories during the 1880s. In this period yields fluctuated wildly as farmers suffered recurrent crop failures in many districts, including Abernethy. Among the many hazards were prairie fires, grasshoppers and gopher infestation.[27] Recurrent drought and frost damage continued to pose problems until the diffusion of risk-reducing cultivation strategies like summer fallowing in the 1890s and the introduction of Marquis wheat after 1900.

For comparisons, homestead cancellation rates were also calculated for Neudorf-area settlers in three townships of comparable distance from the railway. In this area only 16 per cent of non-British nationals, principally Germans, cancelled, compared with 64 per cent of the Anglo-Canadian settlers in the same areas. In other words the

23. *Abernethan* (Abernethy, Saskatchewan), 23 August 1905.
24. PAC, RG 15, Department of the Interior Records, Vol. 326, File No. 80391(2), Rufus Stevenson to A. Walsh, 4 December 1884.
25. Ibid., File 80391 (1)A, Rufus Stevenson to H. Smith, 11 January 1906.
26. "Pheasant Plains," *Progress* (Qu'Appelle), 1 January 1885.
27. For losses sustained from drought and prairie fires in 1885 see *Vidette* (Indian Head), 1 October 1885. A retrospective account of general drought destruction in 1886 is given in Samuel Chipperfield's letter to the editor of *Abernethan*, 4 October 1907, p. 5. Crop failures in 1887 are reported in John Teece's homestead file in SABS, "Homestead Files," No. 133067. Losses from gopher destruction are reported in SABS, A. S. Morton Papers, transcription of Department of the Interior File, No. 225330, letter of A. G. Thorburn, 29 November 1889, appended to the memorandum of Hon. E. Dewdney to the Privy Council, 11 January 1890.

Canadian settlers were four times more likely to fail initially than the Germans.[28] One of the probable reasons for the difference relates to the date of settlement. The Anglo-Saxon settlers arrived in the 1880s when crop failures precipitated many failures, while the Germans settled in comparatively better years of the 1890s.

Some interesting demographic differences between the two populations may also help to explain the homestead statistics. In terms of marital status, more than 40 per cent of Abernethy settlers were unmarried at the time of patent, compared with only 15 per cent of Neudorf homesteaders. Since some of these settlers married in the interval between entry and patent, perhaps the majority were bachelors at the time of entry. Abernethy settlers were also younger than their German counterparts. The mean age of Abernethy homesteaders was twenty-nine in the year of entry, compared with an average age of thirty-four at Neudorf. Only one-sixth of Abernethy settlers were forty years or older, compared with one-third of the Germans. The higher proportion of younger unattached settlers at Abernethy implies a potentially more mobile population.

The study of patent to cancellation ratios at best gives only an indication of short term success or failure. To determine the settlers' long term performance farm turnover rates at five year intervals after the issuance of patent were calculated for two townships, one at Abernethy and the other at Neudorf. This analysis was conducted through a series of land title searches.[29] This test showed that Abernethy settlers were twice as likely as their Neudorf counterparts to persist as settlers. Within ten years after patent half of the Neudorf settlers had dropped out, compared with only one-fourth of the settlers at Abernethy. Twenty years after patent only 24 per cent of the Germans remained, compared with 46 per cent of the Anglo-Canadians (Figure 4).

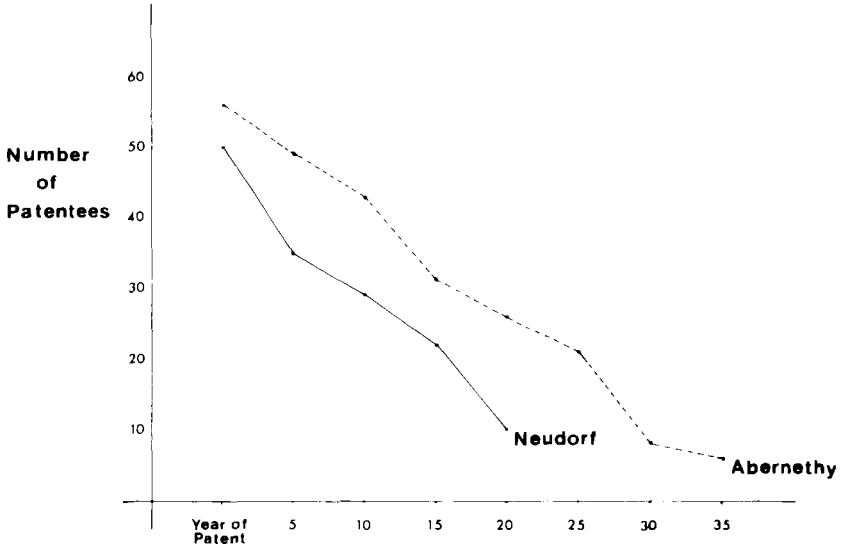
These statistics indicate that many German settlers remained on their homesteads only long enough to obtain a land equity before selling out. To some degree their low persistence also reflects the denser settlement at Neudorf. Settled after the preemption and second homestead rights were abolished, these townships initially had about twice as many homesteaders per township as there were around Abernethy. In the early homesteading period their single quarter section entries were large enough to sustain a self-sufficient agriculture. But commercial farming soon demanded a much larger cultivable land base, particularly since much of the land at Neudorf was consumed by unproductive sloughs or woods. At Abernethy, on the other hand, the disposal of larger acreages of high-quality land accounted for the much higher rate of persistence.

For the Abernethy area, some interesting differences in persistence result when settlers with a single quarter section of free grant land are compared with recipients of

28. SABR, Department of Agriculture, Lands Branch, Township Registers for Townships 19A, 19–21 in Range 8, West of the Second Meridian.

29. Saskatchewan. Department of the Attorney General, Land Titles Branch, Regina, Land Titles for Townships 20, Range 11, and 19, Range 8, West of the Second Meridian. For this tabulation, a settler was considered to persist when his property was transferred to a new owner with the same surname.

Figure 4
Persistence of Homesteaders in the Abernethy and Neudorf Districts



additional Dominion quarters. Of the thirty-six original patentees to Dominion homesteads in the township selected for analysis, ten settlers converted their preemption entries to second homesteads. Nine or 90 per cent of these settlers were still farming their lands in 1906, when a map of land tenure in the region was compiled.[30] Of the other twenty-six settlers who patented just a single quarter section, only 50 per cent were reported as still owning their lands at that date. These trends are consistent with Donald Loveridge's findings in his study of settlement in Sifton Municipality in southwestern Manitoba. In Sifton, the settlers who initially acquired more than one or two quarter-sections were more likely to persist than smaller farmers.[31] Indeed, the rate of persistence increased proportionately with the amount of land assembled in the homesteading period.

For the established settlers, land acquisition did not cease with the end of available free grant lands. Many of the early settlers were in a good position to purchase CPR quarters on adjacent odd-numbered sections when they were opened for sale in the late 1890s. These lands sold at the low prices of three to five dollars per acre.[32] Other

30. Canada. Department of Agriculture, Indian Head Experimental Research Station, "Map of Indian Head and Adjacent District," 1906.
31. Donald M. Loveridge, "The Settlement of The Rural Municipality of Sifton, 1881–1920," M. A. diss., University of Manitoba, 1977, pp. 237–8.
32. Glenbow–Alberta Institute, Canadian Pacific Railway Company Land Records for Sections 19A, 19–21 in Ranges 8–12, West of the 2nd Meridian.

opportunities arose when Hudson's Bay Company and school lands were put on the market. The established settlers were also well-placed to pick up lands when their poorer neighbours sold out. By 1906 Abernethy-area settlers who had taken second homesteads owned farms averaging 720 acres, more than twice the mean acreage of single homestead recipients. Thus, within a quarter century after initial settlement, Abernethy was already a community differentiated by considerable variations in land ownership, with farms ranging from one to six quarter sections or more.

Disparities in economic opportunity continued to characterize Abernethy's farming population throughout the first half-century after initial settlement. A survey conducted by the Saskatchewan College of Agriculture in 1933 showed that over a twenty year period owners of farms of three hundred acres or less in the Indian Head-Balcarres region around Abernethy had experienced a negligible increase in net worth of eighty dollars or about 1 per cent per year. Settlers with the largest farms, i.e. 676 acres or larger, saw their farms increase in value an average of $888. or about 5 per cent per year.[33] The Indian Head-Balcarres study confirmed that even at this late date farmers who had homesteaded continued to enjoy an economic advantage over those farmers who arrived later and purchased their land. In the Indian Head-Balcarres area, 90 per cent of the surveyed homesteaders had purchased lands to supplement their original holdings, compared with only 38 per cent of nonhomesteaders. Similarly, a much higher proportion of homesteading owners had made third and fourth additions of land subsequent to the first addition.[34]

As land values increased, the gap between early settlers and later arrivals widened inexorably. The pre-1900 settlers, whose initial capital outlay was comparatively small, saw their lands rise in value to thirty dollars per acre in the period 1910–14 and forty-five dollars per acre in 1915–19.[35] Since the average price per acre for land purchased before 1900 was five dollars, this represented a capital gain of 900 per cent at the peak of the agricultural boom during World War I. The increase in land rent was even more pronounced for settlers who arrived before 1886. For example W. R. Motherwell obtained 480 acres of Dominion land, including a homestead, second homestead and preemption for $420; he added a CPR quarter section for $800, paid in six annual installments, for a total outlay of $1,200. By 1910 these lands were worth about $20,000 and at the height of the World War I boom, their value was nearly $30,000 or 24 times the initial outlay. While increasing the farmer's net worth these capital gains could also be exploited for further land acquisitions or farm improvements. For example, on acquiring patent to his CPR quarter-section in 1904 Motherwell mortgaged this property for $3,200. It was about this time that he purchased a Hudson's Bay Company quarter. He subsequently negotiated another mortgage on this quarter for $4,000 in 1907, the year in which he raised his barn super-

33. William E. C. Hope and F. C. Hitchcock, "Studies of Financial Indebtedness and Financial Progress of Saskatchewan Farmers," *Agricultural Extension Bulletin No. 68*, University of Saskatchewan, 1935, p. 46.
34. Ibid., p. 34.
35. Ibid., p. 36.

structure.[36] Reaping these capital gains provided the real basis of the Abernethy farmers' wealth, and also gave them a degree of financial flexibility that could pull them through difficult years, an advantage that was not shared by post-1900 settlers.

Even more striking than the economic differences between settlers on free grant land and subsequent settlers were the disparities between districts. In 1935 the Saskatchewan College of Agriculture published another study, which calculated the approximate revenues of farms on varying types of soil in the province on the basis of their previous performance.[37] Based on a comprehensive analysis of farm indebtedness in representative districts in eleven distinct soil belts, the farm revenue study made separate tabulations of revenues and expenditures for 320 and 640 acre farms in each zone. Its conclusions demonstrated the marked inequalities in income that still existed between farmers in different soil zones. That income disparities were present was not surprising, but what was noteworthy was the virtual nonprofitability of the half-section farm in six of the identified soil zones. Among the marginal districts in this category was the Neudorf district. Even at this late date, 75 per cent of Neudorf area farms still comprised less than a half-section. In other words the majority of the farms in this area were not considered viable by the authors of the report.

Even in more prosperous districts, such as Abernethy, there were markedly divergent incomes and capital accumulation for farms of varying acreage. Half-section farms on the "very good park and prairie soils" earned net cash incomes of $510 in 1933. After deduction of noncash depreciation on buildings and machinery, farmers were left with a mean of $307. But farms of 640 acres earned net incomes of $1,280 or more than twice as much per acre of cropland as the half-section farms.[38] These figures demonstrated the marginal status, even on the higher quality soils, of smaller farms that were principally dependent on horsepower. Operators of larger farms, who tended to use tractors, earned incomes sufficient to amortize lands to twice the value of the smaller operations. With the advent of technology, an acceleration of the trend to larger units seemed inevitable, with the result that more operators would lose their farms. Dr. Archer's "agricultural man" was fast becoming "proletarian man."

This case study suggests that settlement at Abernethy and Neudorf was not the organic process that has so often been presented in prairie folklore. Contrary to John Archer's general account, the great majority of the settlers in these two districts did not persist as farmers. At Abernethy more than half of the homesteaders never obtained a patent to their lands; at Neudorf half of the patentees were gone within ten years. While it is impossible to measure subjective factors like perseverance and adaptability, one

36. Saskatchewan. Department of the Attorney General Land Titles Branch, Regina, Land Title for the South-East quarter of Section 23 in Township 20, Range 11, West of the Second Meridian.

37. William Allen, E. C. Hope and F. C. Hitchcock "Studies of Farm Indebtedness for the Principal Soil Types of Saskatchewan," *Agricultural Extension Bulletin No. 64*, University of Saskatchewan, 1935.

38. Ibid.

can establish a statistical relationship between early arrival, acquisition of good, cheap, accessible land and long-term success. At Abernethy, at least, the earliest settlers obtained better land, more of it, more cheaply than subsequent settlers. Beyond the issuance of patent, they were twice as likely to persist as their German neighbours who had obtained single quarter-sections of free-grant land. Moreover it would be inaccurate to attribute homestead failures solely to speculative entries or the unsuitability of the settlers. Many of Abernethy's early homestead failures resulted from the lack of accessible rail service or early crop failures—factors that were generally beyond the control of the settlers themselves. Among settlers who did patent their lands, persistence was not necessarily an advantage. Their long-term economic performance was also closely related to land quality and the amount of free-grant land that was originally obtained. Thirty years after settlement 75 per cent of Neudorf farmers were operating farms of 300 acres or less. Estimates of probable farm revenues and expenditures for these units indicate that these farmers were indeed persisting in proverty.

What is not known is how representative the Abernethy and Neudorf experiences were of Western Canadian settlement generally during the National Policy era. Some of the areas of analysis in the present paper might fruitfully be pursued in other geographical regions. Such studies might provide a basis for comparisons in land disposal, patent to cancellation ratios and long-term rates of persistence. What particularly needs to be determined is the proportion of settlers who acquired additional quarter-sections of land, how much land they acquired and the relationship between these factors and their long-term economic performance. What are available at present are aggregate statistics of acreage disposed in various land disposal categories, but there are not yet sufficient local studies to know how to interpret this data. For example, data for the period 1883–1905 suggest that preemptions accounted for only a comparatively small proportion of overall disposals. In the same period, a much larger proportion of Dominion land was disposed as direct sales.[39] It is not known how many of these sales formed the core of a new farm or how many were used simply to add to an existing farm. Similarly it is not known how many preemption entries overall were converted to second homesteads, as these disposals are buried in the aggregate homestead statistics. Analysis of these entries through local studies and the tracing of patterns of farm ownership over several decades will be essential to the development of new generalizations about why some settlers succeeded and others failed. Clearly, however, the Darwinian model of the evolution of prairie settlement is not, in itself, a sufficient explanation.

39. PAC, RG 15, Department of the Interior Records, Vol. 2000, "Letters Patent Covering Dominion Lands in Saskatchewan, from 1st July 1885 to 31st August, 1905."

APPENDIX A.

RESEARCH DESIGN FOR THE QUANTITATIVE ANALYSIS OF ABERNETHY SETTLEMENT HISTORY

The quantitative analysis presented in this paper was composed of the following steps: a) data capture and verification; b) data analysis; and c) data interpretation. The *data capture and verification* consisted of recording on computer coding sheets information from microfilmed Department of the Interior Homestead Files, Surveyor's Township maps, the 1938 Soil Survey and topographical maps; the last were used to measure distances to railways and supply centres. Complete information was obtained from 461 entries in the Homestead Files and involved recording a total of 104 variables, according to a code book that was prepared to ensure consistent coding. The information on these sheets was then checked against the source documents to ensure accuracy and to determine the interpretation used by the coder during situations not identified in the code book or in notes accompanying the coding sheets. After this coding verification, the data were keypunched on computer cards and then two computer programs were run. The first printed a copy of the raw data from the cards and the second printed a frequency table for each of the 104 variables. These frequency tables provided a first level of analysis and were also used to check for erroneously coded values. For example, in considering the variable Range, it could only be assigned a value of 8 or 11. Therefore if we obtain a value of 6, we know it is incorrect.

The printed data were then examined. A random sample of records was drawn and these were compared to the appropriate coding sheets. Any incorrectly coded values were identified and corrected on the cards. The two programs were then rerun. The first provided a reference copy of the raw data, the second created nine new variables:

i) number of years between entry and application/cancellation for patent;
ii) number of years between when homesteader started to break land and application/cancellation;
iii) average number of acres broken per year;
iv) average number of acres cropped per year;
v) average number of cows;
vi) average number of horses;
vii) average number of sheep;
viii) average number of pigs;
ix) a variable, calculated from the Ethnicity and Geographic Range variables, which could take the four possible values of British Range 8, Non-British Range 8, British Range 11 and Non-British Range 11. The output from this second program consisted of frequency tables for the 113 variables and can also be used as a reference document.

The remainder of the *data analysis* consisted of running computer programs using the Statistical Analysis System (SAS) Computer Package. The SAS procedures used include:

FREQUENCIES provided the frequency tables as described previously and was used to generate various *cross-tabulations* (examples to follow) which provide insights into the similarities or differences between specific subgroups of the data set such as British in Range 11 versus Non-British in Range 8.

MEANS calculated the means of specified variables, such as year of entry, year of application and average number of children per family and was run for the entire data set and for specific groups of files in the data set. For example, the average year of entry for the Abernethy area was 1890 and for the Neudorf area was 1896.

SORT was used to sort the data set alphabetically according to the variables specified, for example LAST NAME. This SORT procedure facilitated the remainder of the analysis as the more complex SAS procedures require the data set to be arranged in some type of sequence in order to analyze subgroups of the data set.

The remaining procedures attempted to find a regression model which could explain some of the variation in the year of entry for homestead application in the study areas. The criterion used examined the amount of variability in the year of entry which is accounted for by the different values of the other variables included in the model and is measured by the statistic R^2, the square of the multiple correlation coefficient. An example of a simple regression is to consider the change in the year of entry with relationship to the change in another variable such as distance to the railway. In this case we consider the later settlement of land as the distance to the railway increases.

R SQUARE was used to provide information on variables which could be included in a multiple regression model. Numerous variables were specified (usually eight or nine at a time) and combinations of these variables were used as input to this procedure which calculates the portion of the variability in the dependent variable, in this case the year of entry explained by the model specified, and allows us to specify numerous possible models at one time. The most appropriate model or models were then chosen for further investigation. In this case the model chosen contained the variables *range, township, distance to railway at entry, distance to railway at application* and *distance to supply centres.*

GLM (General Linear Models) was used to estimate the coefficients in the model which was deemed most appropriate in the R SQUARE procedure. A test of significance was run in order to determine if the estimates of the coefficients were significantly different from zero, and as expected from the R SQUARE procedure we found that they were indeed significantly different from zero.

David Greenwood
Parks Canada, Prairie Region